

Forum Brief

Preparing Students for the Rapidly Changing World: Implications for Instruction and Assessment

A Forum- Monday, July 12, 2010

This three-part forum series addressed the applied skills and capacities students need to succeed in a global, knowledge-based economy and examined leading efforts to better prepare students. The last forum in the series focused on how to adequately assess these applied skills, in addition to content knowledge. In order to prepare students for postsecondary education and careers in a 21st century economy, school should ensure that students graduate with key applied skills, which include, but are not limited to:

- analytical thinking
- communication
- problem-solving
- use of technology
- self-evaluation
- collaboration
- innovation/creativity

The aforementioned skills are areas in which the United States has consistently outperformed other countries, and which we should continue to cultivate in students. Measuring acquisition of these skills requires much more than multiple-choice standardized tests, and can pose logistical obstacles, but research shows that it is feasible. This forum focused on existing and potential assessments that can adequately measure critical competencies, including an overview of research into these measures, Rhode Island's innovative statewide proficiency-based graduation requirements, and the proposals submitted to the US Department of Education for the Race to the Top competition to create new state assessments.

Elena Silva, a senior policy analyst at Education Sector, has researched whether educators can successfully measure more than specific content knowledge. Silva explained that although the intent of No Child Left Behind (NCLB) was to aid previously overlooked populations of students, it created a paradox in which society wants students who are college and career ready but assesses them with an accountability system that zeroes in on a narrow band of content knowledge. Stakeholders want tests to measure what's important (which is still up for debate), to track student improvement, and to show what is and is not working. Public consensus, as well as research, shows that both content and skills are essential. Content knowledge and applied skills are mutually dependent, as higher-order skills are irrelevant without content. "We're in a world where you can't just take information and go with it. You need to create new information," Silva noted, later adding that content is irrelevant if students cannot apply it. While applied skills have

always been useful, they are “newly important” in today’s economy. Though testing skills is time-consuming and raises questions as to the validity and quality of performance measures, Silva stressed that it is possible to adequately assess them. She also underscored that it is possible to measure higher-order skills and content at the same time.

Through her research, Silva identified examples of existing assessments that measure critical skills. The College Work and Readiness Assessment (CWRA) is administered by computer. Students receive a realistic problem to solve using a portfolio of documents. Students determine which information is relevant to the problem, design a solution, and write about their work within about 100 minutes. Due in part to its cost (\$40 per pupil, compared to \$1 or less for traditional standardized tests), the CWRA is used in a small number of private schools. The New Tech Network (comprising more than 100 public schools) and at least one public school district now use the CWRA. With its similarities to a video game, the computer-based assessment River City is an engaging method of assessing knowledge and skills in middle-school science, and also incorporates literacy and social studies. Students enter a virtual 19th century city and are faced with a realistic problem (an unknown illness) and must determine how to diagnose the problem before writing about how to solve it. CRESST POWERSOURCE, a pilot middle school assessment, measures understanding of mathematical principles necessary for success in algebra, and involves a professional development component so that teachers can use the results to improve instruction.

Silva emphasized that teaching and testing applied skills must be integrated with content to enhance existing curricula and assessments. We must ensure that teachers understand and can teach a combination of content and skill development. “It’s not tacking on a class in critical thinking, or just adding it as a bullet on a list of standards to placate some people and show that you are including 21st century skills,” she said, also emphasizing that we should not add on an additional layer of tests, which will not help overburdened teachers. She concluded by cautioning against assuming that all new tests are good simply because they are new.

Sharon Lee is the Secondary Redesign Specialist in the Rhode Island Department of Education’s Office of Multiple Pathways. She provided an overview of the planning, implementation over the last 10 years, and results of Rhode Island’s proficiency-based diploma system, a multiple-measures assessment system that measures both content and skills. Throughout, Lee stressed the importance of involving the community in this reform effort. The new assessment system came in large part as a response to demands from the community, employers, and higher education for high school graduates who were better prepared for the realities of higher education and the working world. Businesses sought graduates who could problem-solve and work independently or collaboratively, and too many students needed remedial courses in college. Thus, the state involved all stakeholders in the reform process – community members, teachers, professional organizations, school leadership, institutes of higher education, and businesses. Transparency and educator buy-in led to increased support for the initiative. Lee also noted the importance of ensuring that the effort is coordinated at all levels,

and that local policies are aligned with state policies. The diploma system received planning grants of \$1 million each from the Bill and Melinda Gates Foundation and the Rhode Island Department of Education, but is otherwise local education agency-funded.

Rhode Island instituted this reform across the state in 2003, and it should be fully implemented in all schools by 2012. The graduation system focuses on a rigorous, aligned and personalized education. “It’s no longer about seat time. Students no longer just accrue credits. It’s really about being proficient in six core areas” including art and technology, Lee said. Students can use multiple measures to demonstrate mastery. Coursework is more flexible; for example, students can meet requirements for one subject area through interdisciplinary work in another. The initiative also promotes constructive adult-student relationships; students have a faculty adviser throughout high school to help ensure that each student is well-known to an adult in the school other than a counselor. Graduation requirements also include the statewide standardized test and diploma assessments. Each LEA can choose two of three forms of diploma assessments (graduation portfolio, exhibition, and comprehensive course assessments). The diploma assessments provide students the opportunity to fully integrate learned content with applied skills at a high level of rigor in ways that better mimic real world experiences.

In addition to engaging teachers throughout the process, the state provided support for teachers in integrating reforms into existing curricula so that it did not create a burden. “This wasn’t adding on to their plate. This was throwing away the dirty plates and bringing in clean plates,” Lee said.

Lee addressed skepticism that statewide assessment reform in a state that’s “the size of a district” wouldn’t work elsewhere by noting that her office had to align 39 districts to one system. She said that involving stakeholders in a meaningful way can help others consistently implement such a reform. Looking forward, Lee said that Rhode Island is in a good place to transition to common core standards by “truly aligning everything, not just checking off boxes.” This alignment is evident in the increasing willingness of colleges to use diploma assessments for student course placement or for admissions, even though these measures do not have quick-and-easy quantitative grades.

Sue Gendron is the policy coordinator for the Smarter Balanced Assessment Consortium (SBAC), one of two consortia of states applying for competitive funds through the Race to the Top assessment competition. She previously served as Maine’s Commissioner of Education. Gendron introduced the Race to the Top competition as an opportunity to respond to the research and existing practices that the other panelists discussed. The competitive assessment fund offers up to \$350 million for consortia of states to design and implement innovative assessments aligned with common core standards. Within the competition, consortia can apply for funding for high school end-of-course assessments (one consortium applied), or for a “comprehensive assessment system grant.” SBAC and another consortium, the Partnership for the Assessment of Readiness for College and Careers (PARCC), applied for the latter, and the maximum grant they

can each receive is \$160 million. As with current NCLB accountability assessments, they must include tests in math and English in grades 3-8, and once in high school.

Gendron outlined the history of the two consortia, which formed from the merger of several smaller consortia. Applicants can choose to be “governing states,” which means they must pilot the assessments so they can be used as models in 2014, regardless of whether they receive federal funding. There are 28 governing states between the two consortia. Gendron said that both consortia are collaborating to “unpack” the common core standards and determine performance indicators.

SBAC’s system will measure student performance through a series of interim assessments and a comprehensive summative assessment which states must administer during the last 12 weeks of the school year. After a phase-in period, all assessments will be computer adaptive tests. The tests will include performance tasks that measure applied and critical thinking skills and that include a writing task. Students will be given a problem to solve over multiple days. The system will measure student growth from year to year, and will include assessments for English Language Learners and students with disabilities from the outset.

SBAC’s goals are focused on preparing students for success in careers and postsecondary education, which they will define in collaboration with higher education and business partners. This necessitates high expectations for all students. SBAC’s theory of action also calls for communication with districts, schools and the public about standards and assessment. Gendron stressed the role of teacher engagement in all aspects of the process, which will allow them to better understand the assessments. SBAC plans to support teachers through curriculum materials, meaningful professional development, and other resources.

Technology will play a crucial role not only because all tests will eventually be computer adaptive, but also because it allows teachers to receive immediate data that they can use to inform instruction. Artificial intelligence will also play a role in assessing performance tasks. Because the tests are computer adaptive, they can measure student performance across the full breadth of content standards, rather than merely comparing it to standards for the student’s current grade level. This can better measure students who are significantly above or below grade level in any area. SBAC also has articulated that assessment results should be clear and shared with all stakeholders so that they can use data in decision-making.

Gendron agreed with Silva that NCLB encourages the measurement of a narrow set of content, adding that the assessments in this competition are focused on individual student growth and on providing teachers with useful information. As other panelists noted, it is important to embed new assessment into what is already happening in classrooms, rather than tacking it onto existing practices. Students will take interim assessments throughout the year, and teachers can choose when to use the assessments and what content to measure depending on the current needs of their classrooms. SBAC calls this approach “through course” assessment.

Question and Answer Period

The first question raised the issue of how new assessments will affect the everyday work of teachers, especially as they will still have to teach subject matter. All three panelists agreed that this will prove a significant burden for teachers. Silva predicted that the reforms will affect all aspects of teaching, from preparation to evaluation, and added that teachers need to be involved in addressing the changes. She noted an increased focus on altering the teaching profession to provide more diverse opportunities; teachers with specific strengths could become leaders in instruction or assessment, for example. Lee suggested that policymakers rethink teacher evaluation systems, and that before evaluating teachers on performance with new standards and assessments, schools should have a window of time for teachers to receive training, monitoring and mentoring. Rhode Island developed networks of teachers to provide support through collaboration. Gendron said that SBAC has reached out to the National Education Association and American Federation of Teachers for help in designing teacher training. By engaging teachers, providing resources, and forging networks with higher education and other organizations, SBAC can lighten the burden on teachers, she said.

The second question raised the issue of whether indicators of work-readiness, including skills such as attendance, consistency and punctuality, may be overshadowed by a focus on complex applied skills. In response, all panelists mentioned increased attention to awarding credit for work-based experiences. Lee said that in Rhode Island, elements such as attendance are not ignored, but traditional grading practices “often lead us into being about just a number on a test and arriving on time and turning things in on time,” while they should also measure higher-order competencies. Long-term portfolio projects and credit-bearing, out-of-school experiences can promote consistency and other career-readiness abilities along with applied skills.

SBAC’s interim assessments will provide multiple measures to determine consistency, Gendron said. She noted the potential for performance tasks to incorporate occupational skills, and predicted that more states will adopt policies such as Rhode Island’s, which allows students to demonstrate proficiency through apprenticeships and internships. Race to the Top also promotes longitudinal data systems that will link educational data to information on postsecondary education, apprenticeships, and earnings.

Silva added that while “college and career ready” is the term of the day, no one is eager to discuss whether all students should go to college. More flexible credit policies – for example, giving credit for internships – can support career readiness but also raise questions of whom to hold accountable for the quality of the internship.

The last questioner asked whether new common core standards will drive the curriculum in new directions, rather than “the same old boring stuff” that has persisted for generations. Gendron responded that “we can’t continue same as,” and that change should occur by using technology, engaging teachers in curriculum development, diversifying learning opportunities, increasing

teacher capacity, and scaling up best practices. Lee added that Rhode Islanders must base instructional decisions on local data. Policymakers can improve instruction by helping teachers use data, but Lee cautioned that this should occur at the local level rather than statewide or nationally because local educators know what will best suit their community's needs. She added that teachers should be flexible because they have "a new tool belt of strategies different than anything we've been exposed to ourselves."

Silva responded that we need high-quality teachers *and* tests, because "one without the other doesn't do much good." She also addressed the argument that school should focus on essential content rather than adding complex skills to the mix. Some critics of teaching applied skills argue that too many students cannot read or write, and schools should focus on basic content rather than teach content *and* skills. "There are kids blocks from here who are going to graduate from 8th grade and not know how to read and write. That's where people who are opposed to 21st century skills are coming from," Silva said. "For all kids to be successful they need both. They need to be able to critically think and navigate the world through a life that's not going to be that easy for those children. New assessments will go in that direction."